

## CLAIMS

What is claimed is:

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1 A graphical display scrolling system comprising:

- a. An apparatus for displaying viewable elements of a graphical display;
- b. an input device having a rotatable element connected with the apparatus, wherein rotation of the rotatable element causes the viewable elements of the graphical display to scroll at a rate that is constant and independent of the rate of rotation of the rotatable element.

2. The input device of claim 1 wherein the rotatable element is a scroll wheel.

3. The input device of claim 1 wherein the rotatable element is a track ball.

4. An input device for scrolling a graphical display comprising:

- a. a rotatable element;
- b. a motion signal generator responsive to motion of the rotatable element, wherein the motion signal generator detects motion of the rotatable element and generates motion signals;
- c. a motion signal interpreter in communication with the motion signal generator, the motion signal interpreter providing one output signal at the end of a predetermined period of time when one or more motion signals are detected within the predetermined period of time; and

d. a software driver in communication with the motion signal interpreter wherein the software driver accepts output signals from the motion interpreter and generates line scrolling commands in response to reception of the output signals, wherein the scrolling rate of the graphical display is constant when the rotatable element is rotated.

5 5. The input device of claim 4 wherein the motion interpreter comprises:

- a. a memory buffer that receives and stores motion signals from the motion signal generator;
- b. a timer that measures the predetermined period of time;
- c. a comparator connected with the memory buffer and the timer to check if a motion signal has been received by the memory buffer within the predetermined period of time; and
- d. an output signal generator in communication with the software driver.

15 6. The input device of claim 5 wherein the predetermined period of time is within the range of about 1 and about 300 milliseconds.

7. The input device of claim 6 wherein the predetermined period of time is within the range of about 15 and about 25 milliseconds.

20 8. The input device of claim 5 wherein the rotatable element is a scroll wheel.

9. The input device of claim 5 wherein the rotatable element is a track ball.

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